

AMENDMENTS TO THE CLAIMS

Please enter the following amendments without prejudice or disclaimer.

Please cancel claims 9-13, 15, 64-68 and 70 without prejudice or disclaimer.

This listing of claims will replace all prior versions, and listings, of claims in the application:

In the claims

Claim 1 (Currently amended): An immunomodulatory polynucleotide/microcarrier (IMP/MC) complex, comprising:

a polynucleotide comprising an immunostimulatory sequence (ISS) linked to a nonbiodegradable microcarrier (MC), wherein the ISS comprises ~~the sequence 5'-C, G-3'~~ a sequence selected from the group consisting of 5'-TCGAAAA-3', 5'-TCGCCCC-3', 5'-TCGGGGG-3', 5'-TCGTTTT-3' and 5'-TCGTCGX₁-3', wherein X₁ is a nucleotide, with the proviso that if the MC is gold, latex or magnetic, the linkage is other than by biotin/avidin.

Claim 2 (Original): The IMP/MC complex of claim 1, wherein said polynucleotide is covalently linked to said microcarrier.

Claim 3 (Original): The IMP/MC complex of claim 1, wherein said polynucleotide is non-covalently linked to said microcarrier.

Claim 4 (Original): The IMP/MC complex of claim 1, wherein said microcarrier is a liquid phase microcarrier.

Claim 5 (Original): The IMP/MC complex of claim 1, wherein said microcarrier is a solid phase microcarrier.

Claim 6 (Original): The IMP/MC complex of claim 1, wherein said microcarrier is from 10 nm to 10 μ m in size.

Claim 7 (Original): The IMP/MC complex of claim 6, wherein said microcarrier is from 25 nm to 5 μ m in size.

Claim 8 (Original): The IMP/MC complex of claim 1, wherein said complex is antigen-free.

Claims 9-13 (Canceled)

Claim 14. (Currently amended): The IMP/MC complex of claim ~~[[12]]~~ 1, wherein the ISS comprises ~~[[a]] the sequence selected from the group consisting of 5'-TCGTCGA-3', 5'-TCGAAAA-3', 5'-TCGCCCC-3', 5'-TCGGGGG-3' and 5'-TCGTTTT-3'.~~

Claim 15 (Canceled)

Claim 16 (Currently amended): The IMP/MC complex of ~~any of~~ claims 1, ~~9, 12, 13,~~ or 14 ~~[[or 15]]~~, wherein said complex further comprises an antigen.

Claim 17 (Original): The IMP/MC complex of claim 16, wherein said antigen is an allergen.

Claim 18 (Original): The IMP/MC complex of claim 1, wherein said polynucleotide comprises a phosphate backbone modification.

Claim 19 (Original): The IMP/MC complex of claim 18, wherein said phosphate backbone modification is a phosphorothioate.

Claim 20 (Original): An immunomodulatory polynucleotide/microcarrier (IMP/MC) complex, comprising:

a polynucleotide linked to a nonbiodegradable microcarrier (MC), wherein the polynucleotide comprises the sequence 5'-C, G-3' and wherein the polynucleotide is 7 nucleotides in length.

Claim 21 (Original): The IMP/MC complex of claim 20, wherein the polynucleotide comprises the sequence 5'-T, C, G-3'.

Claim 22 (Original): The IMP/MC complex of claim 21, wherein the polynucleotide consists of the sequence 5'-TCGX₁X₂X₃X₄-3' or the sequence 5'-X₁TCGX₂X₃X₄-3', wherein X₁, X₂, X₃, X₄ are nucleotides.

Claim 23 (Original): The IMP/MC complex of claim 22, wherein the polynucleotide consists of the sequence 5'-TCGTCGX₁-3', wherein X₁ is a nucleotide.

Claim 24 (Original): The IMP/MC complex of claim 22, wherein the polynucleotide consists of a sequence selected from the group consisting of 5'-TCGTCGA-3', 5'-TCGAAAA-3', 5'-TCGCCCC-3', 5'-TCGGGGG-3' and 5'-TCGTTTT-3'.

Claim 25 (Original): The IMP/MC complex of claim 20, wherein said polynucleotide further comprises the sequence 5'-T, C, G-3'.

Claim 26 (Original): The IMP/MC complex of claim 20, wherein said complex further comprises an antigen.

Claim 27 (Original): The IMP/MC complex of claim 26, wherein said antigen is an allergen.

Claim 28 (Original): The IMP/MC complex of claim 20, wherein said polynucleotide comprises a phosphate backbone modification.

Claim 29 (Original): The IMP/MC complex of claim 28, wherein said phosphate backbone modification is a phosphorothioate.

Claim 30 (Withdrawn): A method of modulating an immune response in an individual comprising administering to an individual a composition comprising an immunomodulatory polynucleotide/microcarrier (IMP/MC) complex in an amount sufficient to modulate an immune response in said individual, said complex comprising a polynucleotide linked to a nonbiodegradable microcarrier (MC), wherein the polynucleotide comprises the sequence 5'-C, G-3'.

Claim 31 (Withdrawn): The method of claim 30, wherein said microcarrier is a solid phase microcarrier.

Claim 32 (Withdrawn): The method of claim 30, wherein said microcarrier is a liquid phase microcarrier.

Claim 33 (Withdrawn): The method of claim 30, wherein said polynucleotide is covalently linked to said microcarrier.

Claim 34 (Withdrawn): The method of claim 30, wherein said polynucleotide is non-covalently linked to said microcarrier.

Claim 35 (Withdrawn): The method of claim 30, wherein said microcarrier is less than about 10 μm in size.

Claim 36 (Withdrawn): The method of claim 30, wherein said complex is antigen-free.

Claim 37 (Withdrawn): The method of claim 30, wherein a Th1-type immune response is stimulated.

Claim 38 (Withdrawn): The method of claim 30, wherein a Th2-type immune response is suppressed.

Claim 39 (Withdrawn): The method of claim 30, wherein interferon-gamma (IFN- γ) is increased in said individual.

Claim 40 (Withdrawn): The method of claim 39, wherein said individual has idiopathic pulmonary fibrosis.

Claim 41 (Withdrawn): The method of claim 30, wherein interferon-alpha (IFN- α) is increased in said individual.

Claim 42 (Withdrawn): The method of claim 41, wherein said individual has a viral infection.

Claim 43 (Withdrawn): The method of claim 30, wherein levels of IgE is reduced in said individual.

Claim 44 (Withdrawn): The method of claim 30, wherein the polynucleotide comprises the sequence 5'-T, C, G-3'.

Claim 45 (Withdrawn): The method of claim 30, wherein the polynucleotide comprises the sequence 5'-purine, purine, C, G, pyrimidine, pyrimidine, C, G-3'.

Claim 46 (Withdrawn): The method of claim 44, wherein the polynucleotide comprises the sequence SEQ ID NO:1.

Claim 47 (Withdrawn): The method of claim 44, wherein the polynucleotide comprises the sequence 5'-TCGX₁X₂X₃X₄-3' or the sequence 5'-X₁TCGX₂X₃X₄-3', wherein X₁, X₂, X₃, X₄ are nucleotides.

Claim 48 (Withdrawn): The method of claim 47, wherein the polynucleotide comprises the sequence 5'-TCGTCGX₁-3', wherein X₁ is a nucleotide.

Claim 49 (Withdrawn): The method of claim 47, wherein the polynucleotide comprises a sequence selected from the group consisting of 5'-TCGTCGA-3', 5'-TCGAAAA-3', 5'-TCGCCCC-3', 5'-TCGGGGG-3' and 5'-TCGTTTT-3'.

Claim 50 (Withdrawn): The method of claim 30, wherein said polynucleotide further comprises the sequence 5'-T, C, G-3'.

Claim 51 (Withdrawn): The method of any of claims 30, 44, 47, 48, 49 or 50, wherein said polynucleotide is 7 nucleotides in length.

Claim 52 (Withdrawn): The method of any of claims 30, 44, 47, 48, 49 or 50, wherein said composition further comprises an antigen.

Claim 53 (Withdrawn): The method of claim 52, wherein said antigen is an allergen.

Claim 54 (Withdrawn): The method of claim 30, wherein said polynucleotide comprises a phosphate backbone modification.

Claim 55 (Withdrawn): The method of claim 54, wherein said phosphate backbone modification is a phosphorothioate.

Claim 56 (Currently amended): A kit, comprising:
an immunomodulatory polynucleotide/microcarrier (IMP/MC) complex, said complex comprising a polynucleotide linked to a nonbiodegradable microcarrier (MC), wherein said polynucleotide comprises ~~the sequence 5'-C, G-3'~~ a sequence selected from the group consisting of 5'-TCGAAAA-3', 5'-TCGCCCC-3', 5'-TCGGGGG-3', 5'-TCGTTTT-3' and 5'-TCGTCGX₁-3', wherein X₁ is a nucleotide; and
~~optionally~~, instructions for use of IMP/MC complex in immunomodulation of an individual.

Claim 57 (Original): The kit of claim 56, wherein said polynucleotide is covalently linked to said microcarrier.

Claim 58 (Original): The kit of claim 56, wherein said polynucleotide is non-covalently linked to said microcarrier.

Claim 59 (Original): The kit of claim 56, wherein said microcarrier is a liquid phase microcarrier.

Claim 60 (Original): The kit of claim 56, wherein said microcarrier is a solid phase microcarrier.

Claim 61 (Original): The kit of claim 56, wherein said microcarrier is from 10 nm to 10 μ m in size.

Claim 62 (Original): The kit of claim 61, wherein said microcarrier is from 25 nm to 5 μ m in size.

Claim 63 (Original): The kit of claim 56, wherein said complex is antigen-free.

Claims 64-68 (Canceled)

Claim 69 (Currently amended): The kit of claim ~~[[67]]~~ 56, wherein the polynucleotide comprises ~~[[a]] the sequence selected from the group consisting of 5'-TCGTCGA-3', 5'-TCGAAAA-3', 5'-TCGCCCC-3', 5'-TCGGGGG-3' and 5'-TCGTTTT-3'.~~

Claim 70 (Canceled)

Claim 71 (Currently amended): The kit of ~~any of claims 56, 64, 67, 68, or~~ 69 ~~[[or 70]]~~, further comprising an antigen.

Claim 72 (Original): The kit of claim 71, wherein said antigen is an allergen.

Claim 73 (Original): The kit of claim 56, wherein said polynucleotide comprises a phosphate backbone modification.

Claim 74 (Original): The kit of claim 73, wherein said phosphate backbone modification is a phosphorothioate.

Claim 75 (Currently amended): A kit, comprising:
the IMP/MC complex of any of claims 20-24; and
instructions for use of IMP/MC complex in immunomodulation of an individual.

Claim 76 (Original): A composition comprising the IMP/MC complex of claim 1 or claim 20 and a pharmaceutically acceptable excipient.

Claim 77 (Original): A composition according to claim 76, wherein the composition is antigen-free.

Claim 78 (Original): A composition according to claim 76, wherein the composition further comprises an antigen.

Claim 79 (Original): A composition according to claim 78, wherein the antigen is an allergen.

Claim 80 (New): The kit of claim 56 or claim 75, further comprising a pharmaceutically acceptable excipient.